



Lexington Solar Taskforce Article #29

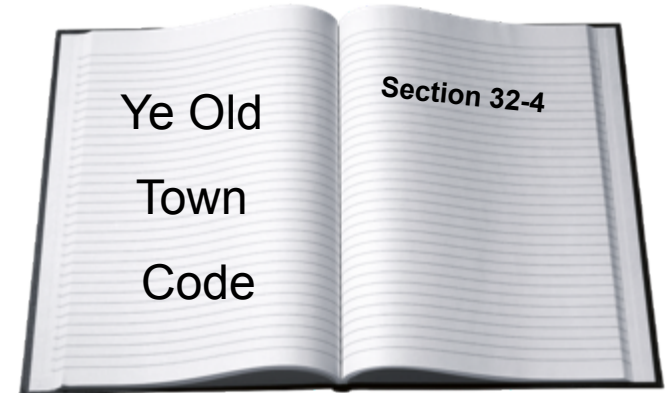
20 March 2013

Article #29 – Amending a contracting By Law

- Town Code Section 32-4: A list of contract types that the Town can enter into.

- Add.....

“Leases, licenses, power purchase agreements, agreements for payments in lieu of taxes (PILOTs), and/or other agreements for the purpose of installing solar energy facilities and purchasing solar electricity 20”

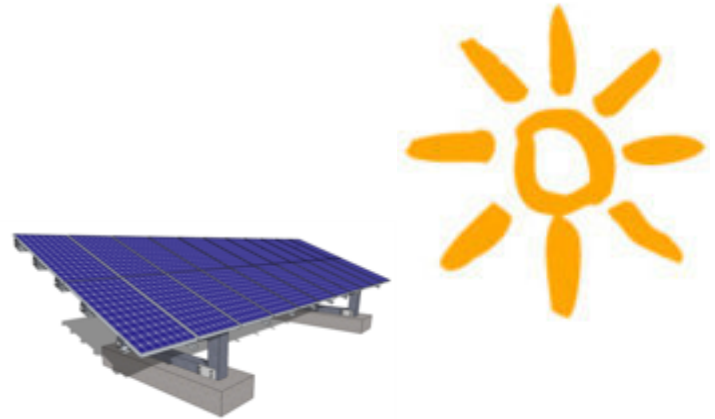


Article #29: Provides the Town with the tools it needs to enter into contracts to install and purchase Solar Electricity.



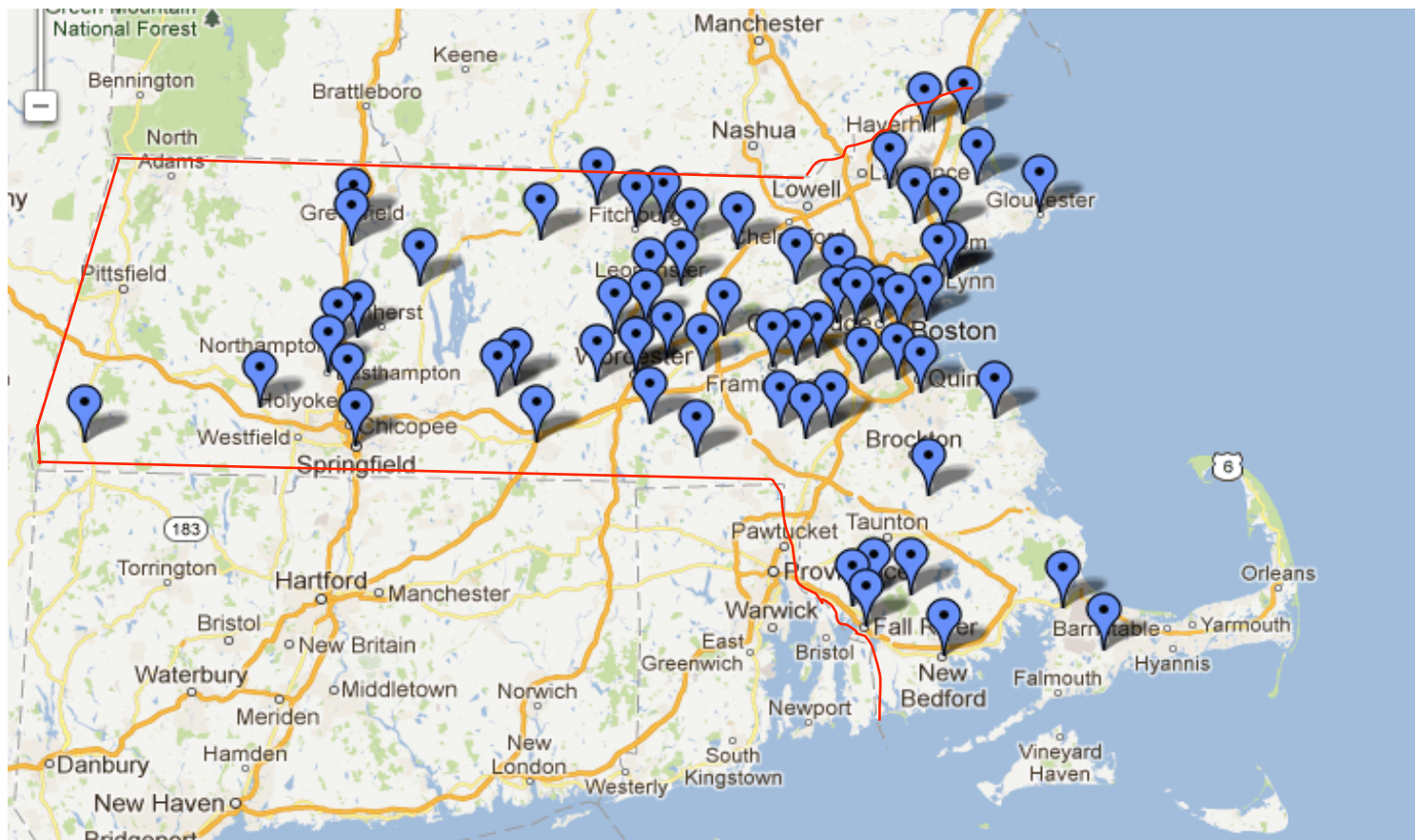
Solar Taskforce

- Formed in August of 2012
- The Taskforce founding members:
 - Department of Public Facilities
 - Appropriation Committee
 - Capital Expenditures Committee
 - Energy Conservation Committee
 - Sustainable Lexington Committee
- Objective: Determine Lexington's Solar Potential
 - Can we save money - pay less for what we do use (\$1.7mm in 2012)!
 - Reduce CO₂



Peer Review – What have other towns done?

- Over 50 towns in MA have solarized Municipal or School buildings.

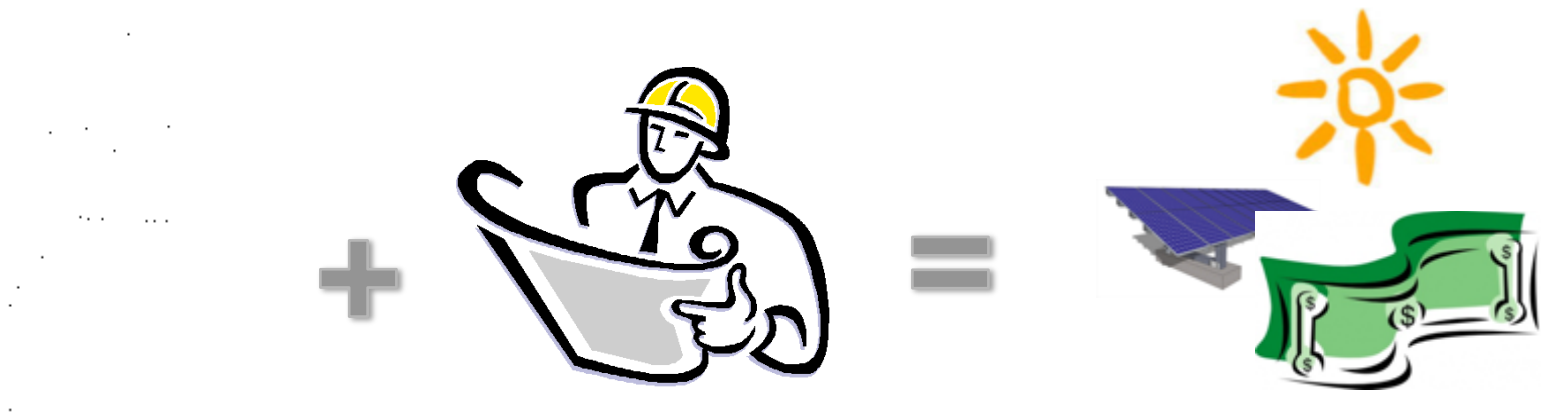


 **Solar technology and contracts, are established and tested.**



Solar Potential – Lessons Learned

- Standard practice has been for communities to partner with a Solar Developer.
- The developer pays for the equipment, construction, maintenance and insurance.
- The town benefits from buying low cost solar electricity – 20yr agreements are typical.



With no capital investment, Lexington is cash flow positive on each kWh the system produces in Year 1.

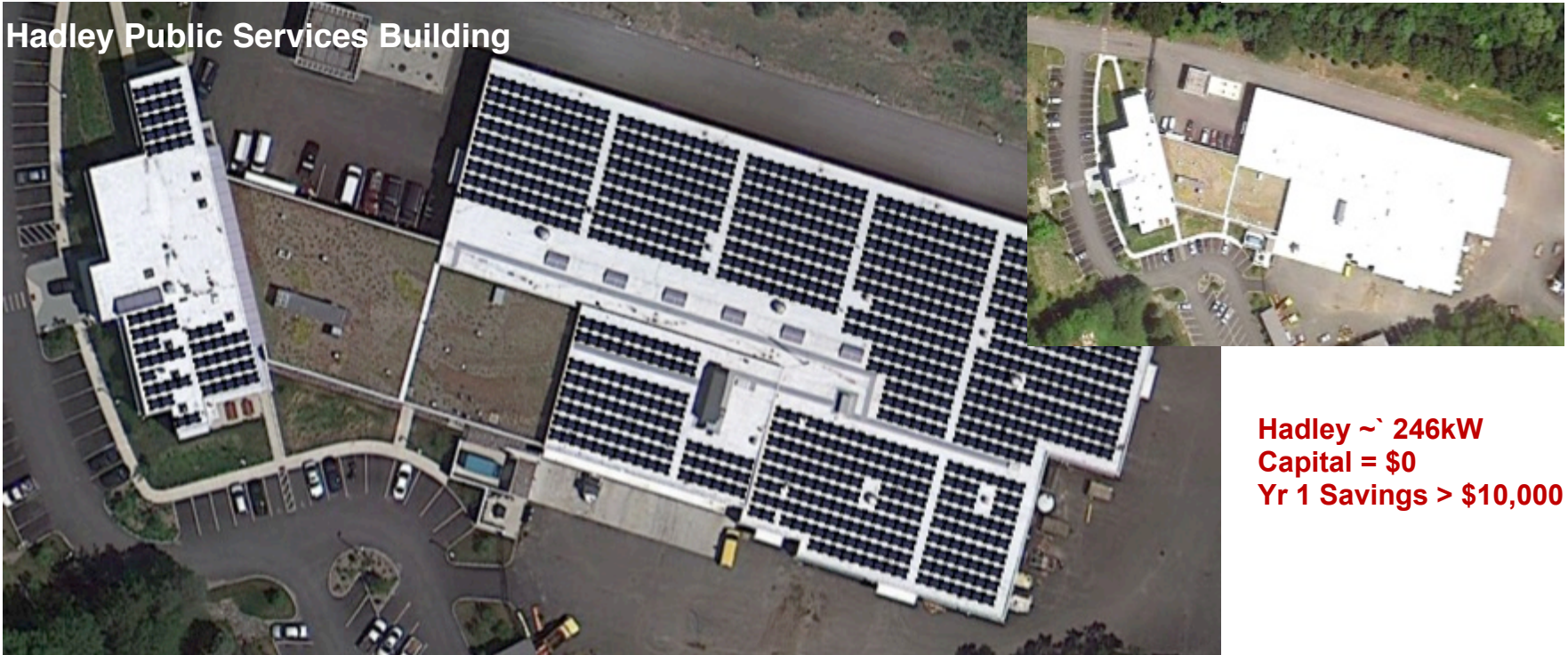


Solar Potential - Analysis

- Partnering with DPF, we have worked with a 3rd party owners agent to validate our technical and economic analysis.

CADMUS

Hadley Public Services Building



Hadley ~ 246kW
Capital = \$0
Yr 1 Savings > \$10,000

Extending across select schools, Solar Potential ~ 2.6MW



\$2-\$4million in 20yr savings.....\$0 Capital

CO2 reduced by 50 million lb or 266 cars off the road.



Article #29 – Conclusion

1. **The Solar Taskforce supports the ongoing development of a Solar business case for consideration by Town management.**
 - Clear Economic Case with potentially \$2-\$4 million in 20yr savings
2. **An amendment to Town By-Laws is required to enable the Town to contract for Solar power on terms that will be favorable to the town.**

MOTION: *That Section 32-4 of Chapter 32 of the Code of the Town of Lexington be amended by adding after the words “Community television services 10” the words “Leases, licenses, power purchase agreements, agreements for payments in lieu of taxes (PILOTs), and/or other agreements for the purpose of installing solar energy facilities and purchasing solar electricity 20”; and further that non-substantive changes to the numbering of this bylaw be permitted in order that it be in compliance with the numbering format of the Code of Lexington.*

 **The Solar Taskforce asks Town Meeting Members to vote in favor of the motion for Article #29.**



Q&A



Solar – Potential Sites

- Built on Cadmus work to include the school buildings in the assessment of solar potential.



- + Bowman
- + Bridge
- + Hastings
- + Clarke
- + LHS

 **Aggregate Solar Potential of 2.6MW....>\$2-\$4million in 20yr savings**



Solar - Potential Sites



 **Additional sites have promise – eg. Hartwell Ave @ 3MW and > \$150,000 in electricity cost savings per year. \$2-\$4mm 20yr.**



What is a Net Metering Credit (Cont.)

- For governmental entities, credits for wind, solar, and agricultural facilities are close to the retail rate

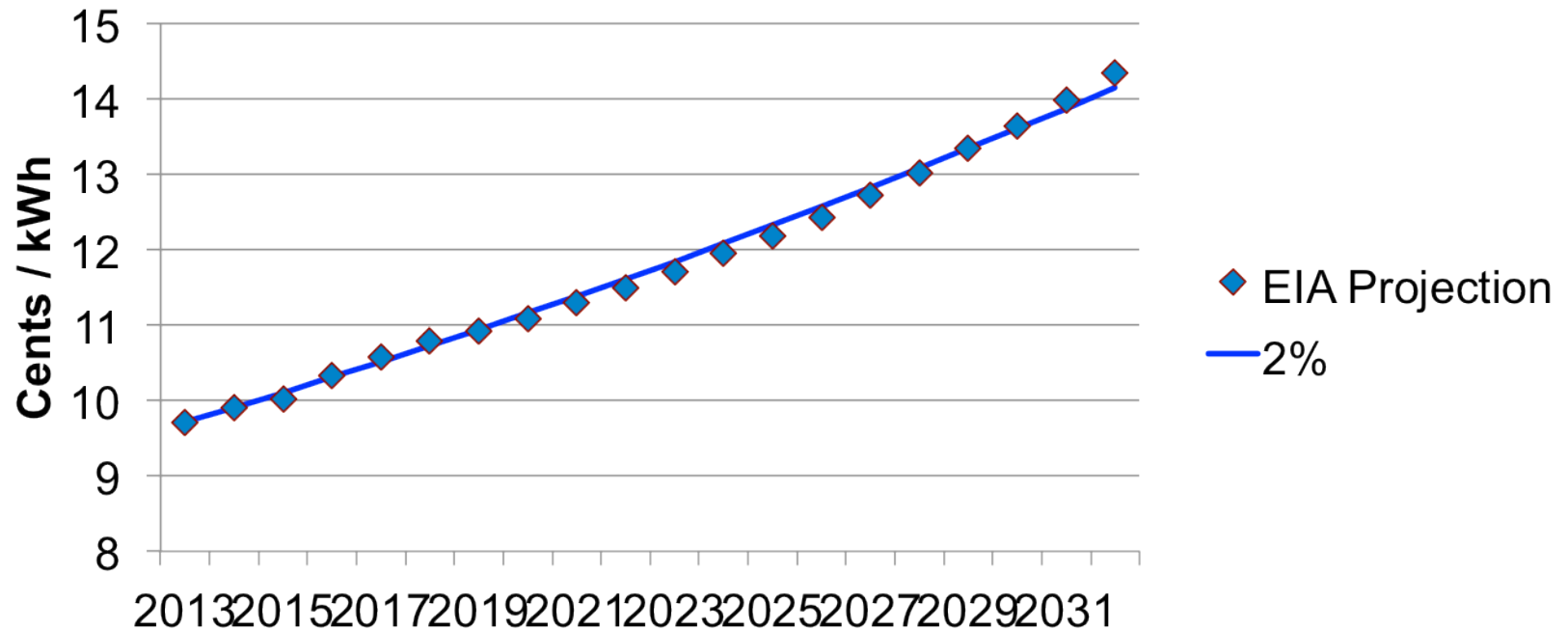
<u>Credit Calculation</u>		<u>Units</u>	<u>Class I</u>	<u>Class I- Wind, Solar, and AG</u>	<u>Class II</u>	<u>Class III</u>
Facility Size or Unit Size (Govt)			≤ 60 kW	≤ 60 kW	>60 kW - ≤ 1 MW	>1 MW - ≤2 MW
	Customer Charge	\$/month				
Delivery	Distribution Charge	c/kWh		✓	✓	*
	Transmission Charge	c/kWh		✓	✓	✓
	Transition Charge	c/kWh		✓	✓	✓
	System Benefit Charge					
	DSM (EE)	c/kWh				
	RE	c/kWh				
Supply	Basic Service	c/kWh		✓	✓	✓
Generation	Average Monthly Clearing Price at the ISO-NE	c/kWh	✓			
* Only applies to municipal or governmental Class III						



Helping Massachusetts Municipalities Create A Cleaner Energy Future



Projected Electric Rates (U.S. Commercial)

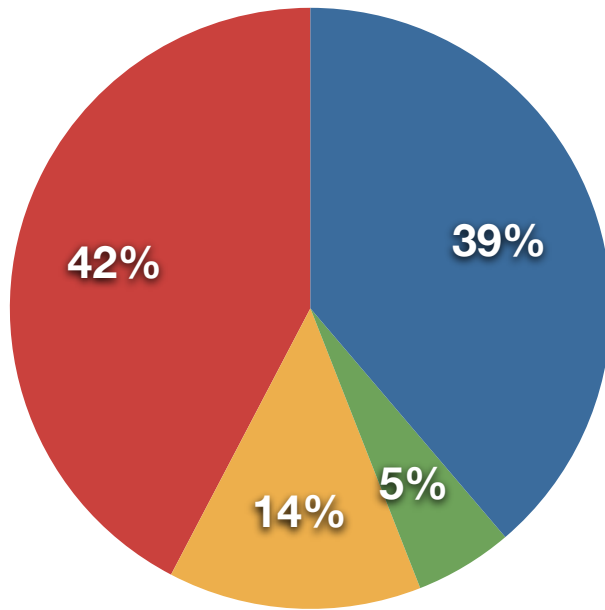


Source: U.S. Energy Information Agency, AEO2013 Early Release, TABLE A8, Electricity Supply, Disposition, Prices, and Emissions
www.eia.gov/forecasts/aeo/er/index.cfm



Net Metering Credit – Delivery & Generation

Net Metering Credit



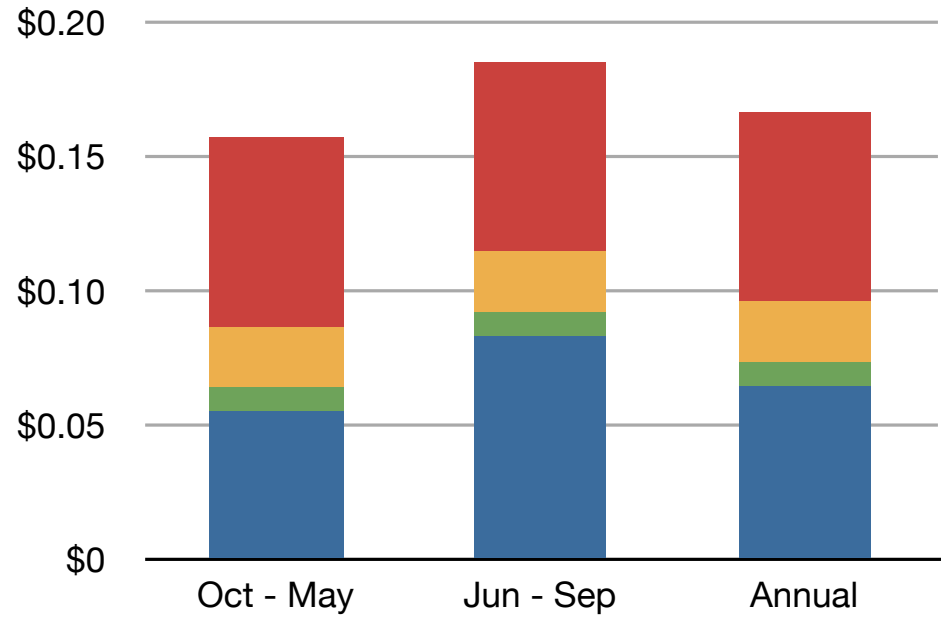
● Distribution

● Transition

● Transmission

● Generation

Net Metering Credit



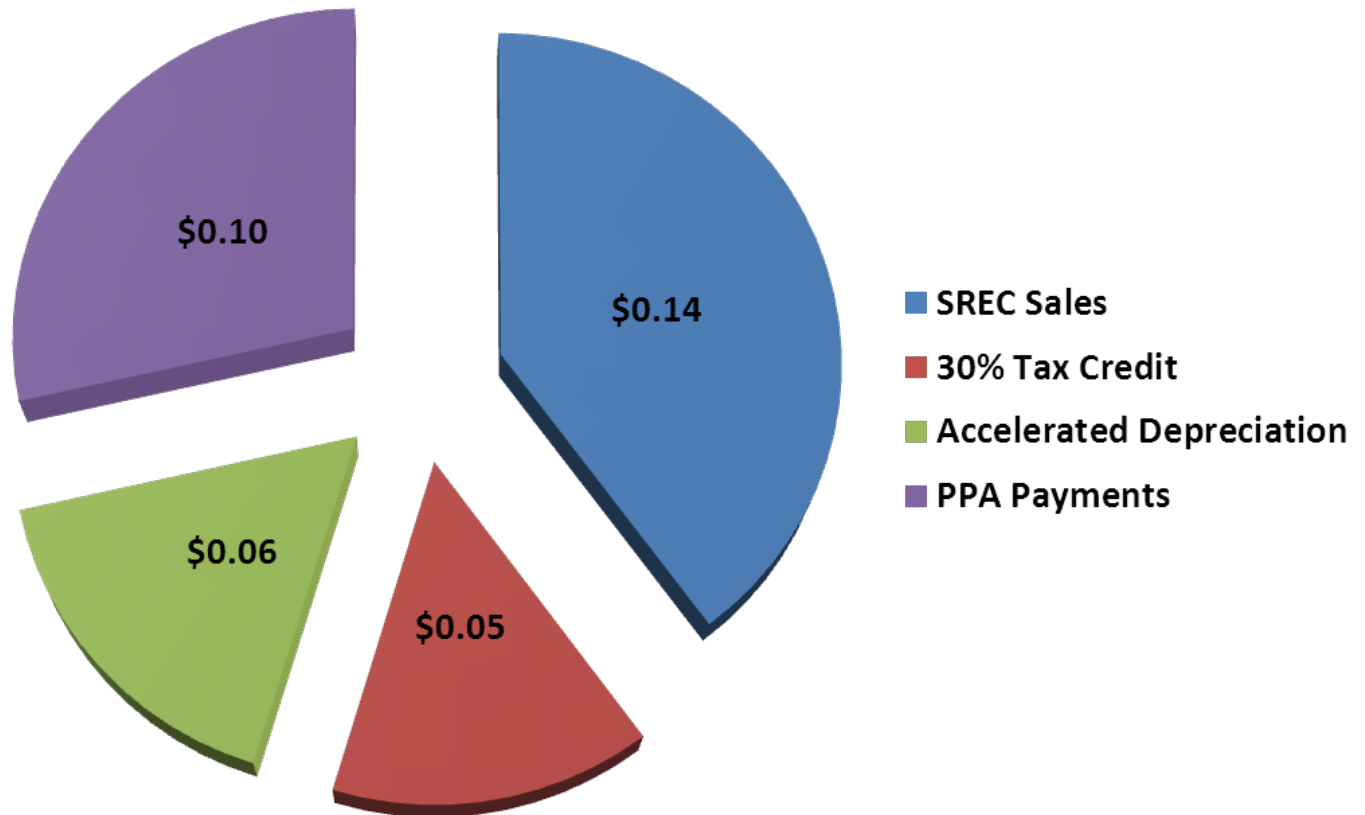
Why Now Is a Good Time for a PPA

- ***Installed PV prices have dropped substantially***
 - ***we expect a slower rate in future.***
- ***But incentives will not always be available***
 - ***Federal ITC (30%) (through 2016)***
 - ***SRECs (400 MW cap) (est. through 2014)***
 - ***Net Metering (3% cap) (est. through 2016)***



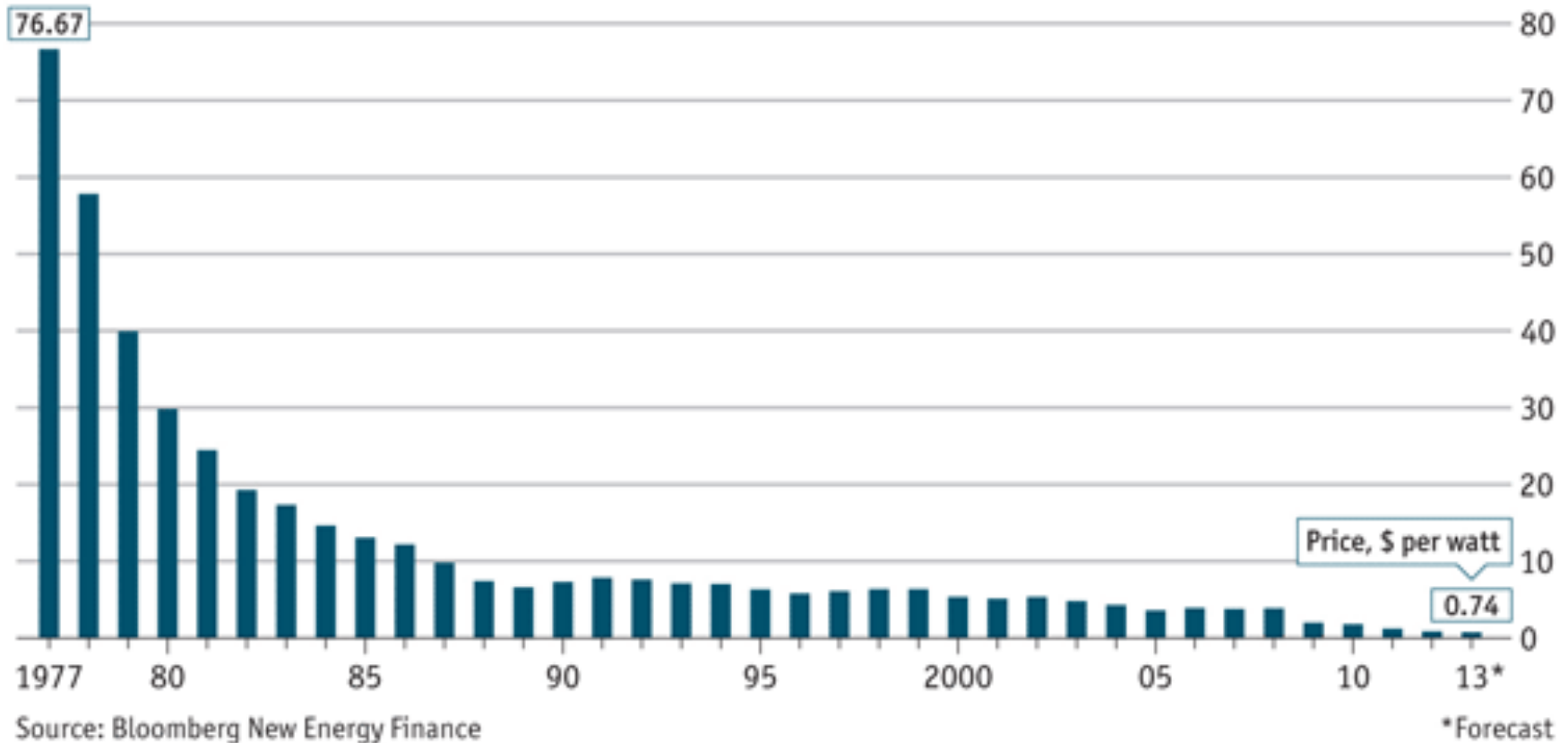
Why Now Is a Good Time for a PPA

Developer Revenue 20
Year **Average**
(\$/kWh)



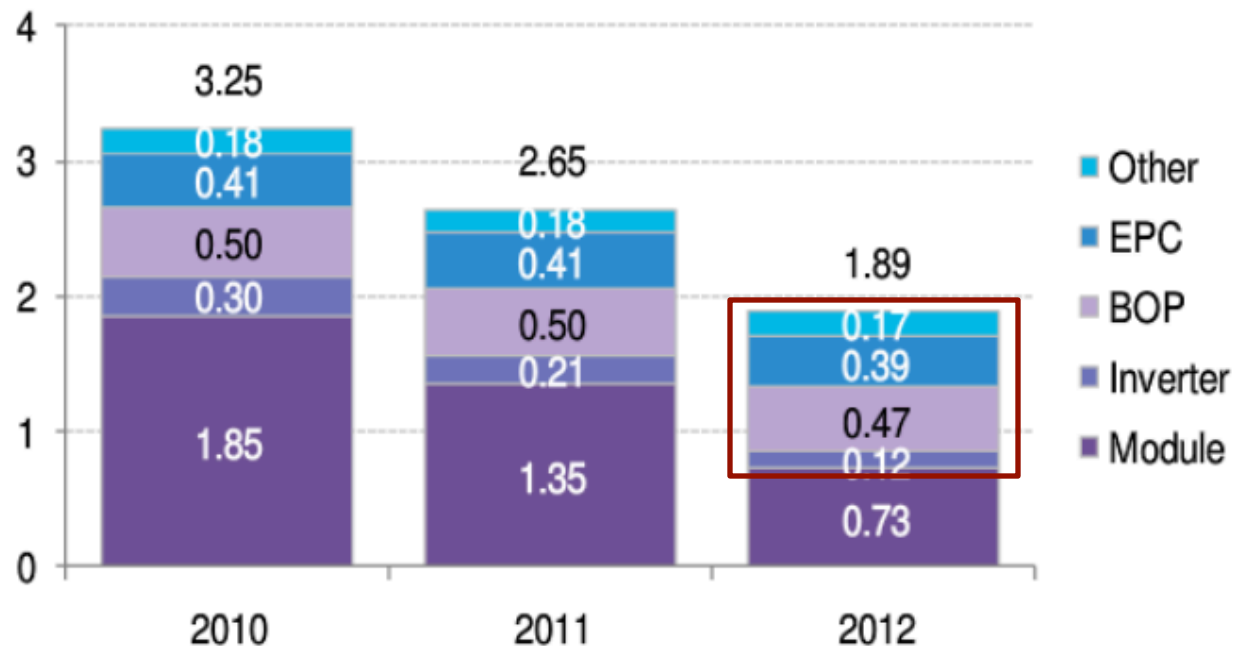
PV Module - Cost Trends

Price of crystalline silicon photovoltaic cells, \$ per watt



PV System Cost Trends

CAPEX – BEST-IN-CLASS COST OF GLOBAL UTILITY-SCALE PV, 2010-12, (\$/W)



Source: Bloomberg New Energy Finance



What Happens If Developer Defaults On Contract?

- ***Most projects owned at least in part by bank that finances the project.***
- ***In typical contract:***
 - ***Bank has the option of taking over the project (e.g. hiring a company to take over O&M)***
 - ***Key considerations for contract negotiations:***
 - ***Insurance***
 - ***Decommissioning Assurance***
 - ***Early Buyout Options***



Sample Communities (PPAs or In Negotiations)

- ***Belmont***
- ***Acton***
- ***Scituate***
- ***Newton***
- **Natick**
- **Lancaster**
- **Dartmouth**



Article #29 and Associated Motion

ARTICLE 29: AMEND GENERAL BYLAWS – CONTRACTS AND DEEDS (SOLAR ENERGY PURCHASING)

To see if the Town will vote to amend Section 32-4 of Chapter 32 of the Code of the Town of Lexington (Authorization to Solicit Award and Enter Certain Contracts) by adding after the words “Community television services 10” the words “Leases, licenses, purchase power agreements, agreements for payments in lieu of taxes (PILOTs), and/or other agreements for the purpose of installing solar energy facilities and purchasing solar electricity 20”; or act in any other manner in relation thereto.

MOTION: That Section 32-4 of Chapter 32 of the Code of the Town of Lexington be amended by adding after the words “Community television services 10” the words “Leases, licenses, power purchase agreements, agreements for payments in lieu of taxes (PILOTs), and/or other agreements for the purpose of installing solar energy facilities and purchasing solar electricity 20”; and further that non-substantive changes to the numbering of this bylaw be permitted in order that it be in compliance with the numbering format of the Code of Lexington.



Town Code Section 32-4

§ 32-4. Authorization to solicit, award and enter certain contracts.

[Added 3-31-2008 ATM by Art. 33; amended 3-22-2010 ATM by Art. 26] Unless otherwise prohibited by law, the Town and all of its departments, under the supervision of the Town Manager, are authorized to solicit, award and enter into certain types of contracts for periods shown below, including any renewal, extension or option provision, subject to annual appropriation, applicable state procurement laws, and the approval of the Board of Selectmen for contract terms greater than three years:

Type of Contract	Number of Years
Lease of public lands and buildings	20
Lease of any equipment	10
Lease purchase of any equipment	10
Maintenance agreements for equipment, buildings or grounds	5
Transportation services	10
Purchase of oil, fuel and electricity	5
Lighting maintenance	10
Waste disposal and recycling	20
Water supply	20
Community television services	10
All other contracts	5

